

Peirce's Account of the Categories and Ramon Llull¹

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Since the pioneering studies of John Boler it has become more and more evident how deep was the impact of mediaeval philosophy on Peirce. Thus, Boler and others have studied thoroughly the important debt owed by Peirce to Duns Scotus' metaphysics and his theory of the so-called *formalitates*.²

Peirce himself did not conceal his admiration for Scotus, Ockham and certain other mediaeval writers with their rigorous application of logic to the problem of universals.³ However, the impact of mediaeval philosophy on his thought might be much broader than what his explicit statements betray. It is in this sense that Allan R. Perreiah has stated the need for a more detailed examination of Peirce's mediaeval sources, one which does not limit itself to the authors and texts Peirce acknowledges explicitly as his sources, but which would also take

¹ I am grateful for the help of Sara Barrena, Jaime Nubiola and José Vericat from the Grupo de Estudios Peirceanos (Pamplona) and of Robert D. Hughes (Prague). It was a remark of Anthony Bonner (Palma de Mallorca) which inspired me to write this paper, see below n. 13.

² Cf., among others, John Boler, *Charles Peirce and Scholastic Realism: A Study of Peirce's Relation to John Duns Scotus* (Seattle: University of Washington Press, 1963), and Ludger Honnefelder, *Scientia transcendens. Die formale Bestimmung der Seiendheit und Realität in der Metaphysik des Mittelalters und der Neuzeit* (Duns Scotus – Suárez – Wolff – Kant – Peirce) (Hamburg: Felix Meiner Verlag, 1990), esp. pp. 382-402.

³ Cf. for Scotus: CP 2.166 and 4.28, for Ockham: 1.29 (= Charles S. Peirce, *Collected Papers*, ed. Charles Hartshorne, Paul Weiss and Arthur Burks, 8 vols. [Cambridge, MA: Harvard University Press, 1931-1958]). On Peirce and Ockham see John Boler, "Peirce, Ockham and Scholastic Realism", *The Monist* 63 (1980), pp. 290-302, and Fred Michael, "The Deduction of the Categories in Peirce's 'New List'", *Transactions of the Charles S. Peirce Society* 16 (1980), pp. 179-211.

into consideration the wider context of mediaeval philosophy.⁴ Perreiah himself presented some possible connections between Peirce and certain mediaeval philosophers, such as Peter of Spain. At the end of his article he formulates some *desiderata*, the first of which is the elaboration of a list of key Peircean concepts and an analysis of their possible mediaeval origins. This is what the present paper will try to do with regard to the famous triplet "Firstness", "Secondness" and "Thirdness".

Peirce and the categories

It is well known that these concepts are at the heart of one of Peirce's most significant doctrines: his theory of the categories. This theory itself and its development throughout the years are rather complex and therefore cannot be discussed here in detail.⁵ In this paper, I will have to limit myself to recalling only certain aspects and stages in the evolution of Peirce's account of the categories.

Its starting point is the Kantian idea of a list of categories which Peirce appropriates and remodels in his "On a New List of the Categories" from 1867 (published 1868). Peirce himself acknowledges his Kantian debt when he describes his project as "based upon the theory already established that the function of conceptions is to reduce the manifold of sensuous impressions to unity"⁶ in order to find out what *is* or *has being*. However, his approach differs from that of Kant in that he wishes to arrive at a list of the categories by way of an analysis of the structure of propositions rather than of judgments, as Kant did.

This early attempt at articulating the categories in the form of a new list, seems to have been modified by Peirce during the following years. In fact, 20 years later we find him construing a new approach to the problem of the categories, which are now described in terms of his logic of relations. Thus, in his article "One, Two, Three: Fundamental Categories of Thought and of Nature",

⁴ Cf. Allan R. Perreiah, "Peirce's Semiotic and Scholastic Logic", *Transactions of the Charles S. Peirce Society* 25 (1989), pp. 41-49. Boler's recent reply seems too hard to me; cf. his article "Peirce and Medieval Thought", in: Cheryl Misak (ed.), *The Cambridge Companion to Peirce* (Cambridge: Cambridge University Press, 2004), pp. 58-86, here pp. 63-65.

⁵ A good exposition of this theory and its development is still to be found in Christopher Hookway, *Peirce* (London: Routledge and Paul Kegan, 1985), pp. 80-117. For a succinct overview see Cheryl Misak, "Charles Sanders Peirce (1839-1914)", in: *ead.* (ed.), *The Cambridge Companion to Peirce*, *op. cit.*, pp. 1-26, here pp. 19-23.

⁶ W 2, 49 (= Charles S. Peirce, *Writings of Charles S. Peirce: A Chronological Edition*, ed. Max H. Fisch et al., 6 vols. [Bloomington: Indiana University Press, 1982-1999]).

from 1885, Peirce suggests that the reader conceive of the categories as monadic, dyadic and triadic relations, all higher relations being reducible to the latter. It is in this context, that Peirce introduces the concepts we are concerned with in this paper: "Firstness", "Secondness" and "Thirdness". What he actually means by these concepts becomes clear from his draft for "A Guess at the Riddle" (1890), where Peirce fleshes out his new categories: The monadic relation is "Firstness" in the sense that it is "separated from all conception of or reference to anything else", "present and immediate", etc.; the dyadic relation, in turn, is "Secondness" in so far as it "suffers and yet resists", "it is something which is there, and which I cannot think away, but am forced to acknowledge as an object or second beside myself", etc.; the triadic relation, finally, is "Thirdness" for "it bridges over the chasm between the absolute first and last, and brings them into relationship", etc. (CP 1.357-359).

How important these concepts are to Peirce's philosophy in general becomes evident from his later writings, for instance from his "Lectures on Pragmatism", dating from 1903, where he distinguishes them as constitutive elements of his program and identifies the science which is concerned with the categories as phenomenology.

Peirce and Llull

As has been said before, Peirce's theory of the categories is complex and, as the preceding lines may have indicated in brief, it underwent several modifications and changes. It would therefore be naïve to think that it is possible to single out a unique source for it; not only because there seem to be many of them, but also because, in the end, it may not be reducible *in toto* to any author or authors other than Peirce himself.

Nevertheless, I would like to point to one mediaeval tradition which might have been decisive with respect to Peirce's elaboration of the concepts of "Firstness", "Secondness" and "Thirdness". The tradition I am referring to is, of course, that of Ramon Llull and his followers. His philosophical system, the *Ars*, which takes the basic concepts of the three monotheistic religions of his time and combines them in quasi-mechanical figures in order to convince Muslims (and Jews) of the (logical) superiority of Christianity and, so, to convert them to the Christian faith, has, throughout history, earned Llull both admiration and contempt.

Matters were no different in the case of Peirce: Influenced by Carl Prantl – one of Peirce's main sources for mediaeval logic – and his harsh (and, as we

know today, tendentious) criticism of Ramon Llull,⁷ Peirce refers sometimes with scorn to the Majorcan *Doctor illuminatus*. Thus, in 1892, we find a not very flattering reference to Llull in a general invective against mediaeval philosophers, whose comments range from the "stupid Albertus Magnus" and "the superficial John of Salisbury" to "the insignificant Cusa" and "the crazy Raymond Lully".⁸ And only one year later, in 1893, when speaking of Leibniz, Peirce states: "As a logician [Leibniz] was a nominalist and leaned to the opinion of Raymond Lully, an absurdity here passed over as not worth mention" (CP 4.36). But, of course, Peirce was independent enough from Prantl to form his own judgments,⁹ and so, positive references to Llull can also be found in his works, such as the following note in the "Syllabus of Sixty Lectures on Logic" from 1883: "The *Topics*. Aristotle. Later developments. The *Ars magna* of Raymond Lully. Possible future of this part of logic" (W 4, 487). Another passage which shows Peirce's appreciation of Llull, from CP 3.465, is given below.

In fact, recently, Ana Maróstica and Fernando Zalamea have argued convincingly that there are important similarities between Llull and Peirce.¹⁰

Llull's account of *prioritas*, *secundioritas* and *tertioritas*

Returning to the question which is under scrutiny in this paper, i.e. Peirce's categories, it is worth considering one of Llull's major works, the *Arbor scientiae*. In this encyclopaedic *opus* from 1295-1296, Llull presents 16 trees which are conceived as embracing all of reality and human knowledge, starting from the elementative world, and proceeding through the vegetative and the sensitive realms up to those of the angels and God. The image of the tree is used by Llull to emphasize the organic unity of human knowledge.¹¹

⁷ Cf. Carl Prantl, *Geschichte der Logik im Abendlande*, 4 vols. (Leipzig, 1855-1870, reprinted Darmstadt: Wissenschaftliche Buchgesellschaft, 1955), for Llull vol. III, pp. 145-177. Prantl, in fact, starts his chapter on Llull with an apology for having included all manner of Lullian nonsense ("dummes Zeug", "Unsinn", etc., *ibid.*, p. 145) in his history of logic. Nonetheless, he says, it might be appropriate to have done so, for this would exempt future generations once and forever from wasting their time with Llull.

⁸ Charles S. Peirce, *Contributions to 'The Nation'*, ed. Kenneth Laine Ketner and James Edward Cook, 4 vols. (Lubbock: Texas Tech Press, 1975-1979), vol. I, p. 130.

⁹ For Peirce's criticism of Prantl, cf., for instance, CP 2.218, where he comes to qualify Prantl's arguments as "peremptory and slashing".

¹⁰ Cf. Ana H. Maróstica, "Ars combinatoria and Time: Llull, Leibniz and Peirce", *SL* 32 (1992), pp. 105-134, and Fernando Zalamea Traba, *Ariadna y Penélope. Redes y mixturas en el mundo contemporáneo* (Oviedo: Ediciones Nobel, 2004), esp. pp. 93-117.

¹¹ The importance of this topic for Peirce, with explicit reference to Llull's *Arbor scientiae*, has been remarked upon by Jaime Nubiola, "The Branching of Science According to C. S. Peirce (Abstract)", in:

In the first and third trees, i.e. the trees concerned with the elementative and sensitive worlds respectively, we find, among Llull's key concepts (which he calls the Hundred forms), the following:

Arbor elementalis:

36. De prioritare

Arbor elementalis prima est per prioritatem ad Arborem vegetalem et sensualem; et hoc est, quia prioritas est una de partibus suis, per quam est arbor prima [...] Et subiectum huius prioritatis est [...], in quo ponunt similitudines sustentatas in potentiis [...]

37. De secundioritate

Secundioritas est in arbore una pars naturalis, ratione cuius radices se habent prius ad truncum quam ad brancas, et truncus se habet prius ad brancas quam ad ramos. [...] Et in hoc sunt significatae secundariae intentiones et primae, quae stant in rebus elementatis.

38. De tertioritate

Tertioritas est in Arbore elementali una pars generalis ad tertioritates arborum individuatarum, in quibus transeunt arbores in numerum tertium [...]

Arbor sensualis:

[17. De prioritare, secundioritate et tertioritate]

Prioritas [36], secundioritas [37] et tertioritas [38] sunt formae primariae ad Arborem sensualem. Sicut Arbor elementalis, quae est prima naturaliter ad Arborem vegetalem, et vegetalis ad sensualem, ex quibus sequitur secundioritas et tertioritas, videlicet antecedens et consequens et tertius numerus substantiae [...]¹²

The verbal coincidence between Peirce's categories and Llull's forms is obvious,¹³ and also the general doctrinal similarities are quite striking: Llull and Peirce both use the concepts "Firstness" (*prioritas*), "Secondness" (*secundiori-*

Volume of Abstracts, 10th International Congress of Logic, Methodology and Philosophy of Science (Florence, 1995), p. 355 (a complete version of the article is available at the Arisbe web page: <http://www.cspeirce.com>).

¹² All quotations from the *Arbor scientiae* are taken from the critical edition by Pere Villalba Varneda in the *ROL* XXIV-XXVI; the passages referred to here are from vol. XXIV, pp. 76-78 and 157.

¹³ This coincidence has already been acknowledged by Anthony Bonner, "The Structure of the *Arbor scientiae*", in: Fernando Domínguez Reboiras, Pere Villalba Varneda and Peter Walter (eds.), *Arbor Scientiae: Der Baum des Wissens von Ramon Llull (Akten des Internationalen Kongresses aus Anlaß des 40-jährigen Jubiläums des Raimundus-Lullus-Instituts der Universität Freiburg i. Br.)* (Turnhout: Brepols, 2002), pp. 21-34, here p. 29, n. 37.

tas) and "Thirdness" (*tertioritas*) to describe the ultimate structure of reality and predication.

But also, with regard to Lull's concrete description of the three concepts, significant parallels with Peirce can be detected: for instance, Lull's reference to possibility in describing *prioritas* (no. 36) corresponds to Peirce's conception of "Firstness" as the "mode of being which consists in [...] a positive qualitative possibility" (CP 1.25). Moreover, concerning Lull's description of *secundioritas* and his reference there to first and second intentions (no. 37), it might be worth mentioning that Peirce once refers very positively to Lull precisely on this subject: "Avicenna defined logic as the science of second intentions, and was followed in this view by some of the most acute logicians, such as Raymond Lully, Duns Scotus, Walter Burleigh [...]" (CP 3.465).¹⁴ However, as far as I can see, Peirce's notion of "Secondness", since it is prior to language and knowledge, does not yet include that conceptual aspect belonging specifically to "Thirdness". Finally, for Lull as for Peirce, *tertioritas* is the concept which "bridges" (*transeunt*) "First-" and "Secondness", leading to an irreducible third (no. 38).

Although, in his *Arbor scientiae*, Lull does not tell us so, his account of *prioritas*, *secundioritas* and *tertioritas* is built on a veritable logic of relations. This becomes clear in his *Logica nova* (1303). Here, Lull, like Peirce, seems to reduce every possible relation to dyadic or triadic ones:¹⁵

Relatio est quanta duobus modis: dualitate et ternalitate. Dualitate, sicut pater et filius, actio et passio, abstractum et concretum; et sic de aliis. Ternalibus, sicut intellectivum, intelligibile, intelligere; possificativum, possificabile, possificare; calefactivum, calefactibile et calefacere.¹⁶

After what has been said until now, there can be little doubt that Peirce's account of the categories must have been inspired, in some way, by Lull. But the question is: in what way? For if we look at Peirce's references to mediaeval sources, we do not find among them any evidence of his having read the *Arbor scientiae*.

¹⁴ Regarding Lull's doctrine of intentions, cf. Josep Maria Ruiz Simon, "En l'arbre són les fuyles per ço que y sia lo fruyt – Apunts sobre el rerafons textual i doctrinal de la distinció entre dues intencions en l'anàlisi de l'activitat *propter finem* dels agents naturals", *SL* 42 (2002), pp. 3-25.

¹⁵ For Lull and his logic of relations see Anthony Bonner, "Ramon Lull: relació, acció, combinatòria i lògica moderna", *SL* 34 (1994), pp. 51-74, where Bonner places Lull within the context of the modern logic of relations as conceived by De Morgan, Schröder and, of course, Peirce.

¹⁶ *ROL* XXIII, p. 67. Also in Raimundus Lullus, *Die neue Logik – Logica nova*, ed. Charles Lohr, German transl. Vittorio Hösle and Walburga Büchel (Hamburg: Felix Meiner Verlag, 1985), p. 110.

In the MS 1549 "Catalogue of Books on Mediaeval Logic which are Available in Cambridge" (1868) no corresponding item can be identified with certainty. What *can* be found there, under the rubric "[Schoolmen of Prantl's] § XVIII", are only two fairly general entries for Llull: "Raymund Lully Logical Works 23-11" and "Extracts from another work in Prantl". These references could be directed to the *Arbor scientiae* which is, indeed, mentioned in Prantl and also available in three early editions from the 15th and 16th Century at the Harvard University Library.¹⁷ But this remains a hypothesis.¹⁸

Prioritas, secundioritas and tertioritas in the Zetzner edition of Llull's works

From another of Peirce's Lists¹⁹ we know that he possessed an important collection of Lullian and Lullist texts, namely the Renaissance edition by the famous Strasbourg editor Lazarus Zetzner:²⁰ *Raymundi Lulli Opera ea quae ad adinventam ab ipso Artem universalem... pertinent* (printed first in 1598, then 1609, 1617 and, by his heirs, in 1651).²¹

This edition, which was very influential – the young Leibniz, for instance, acquainted himself with Llull through this anthology –, contains several works by Llull himself as well as those Renaissance commentaries on his works by Agrippa of Nettesheim, Giordano Bruno and Valerius de Valerius.²² Unfortunately

¹⁷ The three editions are located at: Countway Medicine Rare Books Ballard 800 (Ed. Barcelona: Pere Posa, 1482); Houghton f *SC.L9695.482ab (Ed. Barcelona: Pere Posa 1505); Houghton C 713.21* (Ed. Lyons: Gilbert de Villiers, 1515).

¹⁸ In any case the two entries confirm that Peirce had already become familiar with Llull at an early stage of his intellectual career and that the nature of this first contact must have, in fact, been determined – in a rather unfortunate manner, as I indicated earlier – by his reading of Prantl.

¹⁹ Cf. MS 179 "List of Books on Logic, Scholastic Philosophy, etc. from the Library of Prof. C. S. Peirce". Here we read: "*Raymundi Lulli Opera ea quae ad adinventam ab ipso artem... pertinent*. With the *Clavis Artis lullianae* of J. H. Alsted, 2 vols. in 1. 8vo (1614)." (I owe this information to José Vericat.) Obviously, the book was composed of two originally independent volumes which were bound together, one being the *Opera ea quae...*, the other Alsted's *Clavis Artis lullianae*, from 1609.

²⁰ On Zetzner cf. Rita Sturlese, "Lazarus Zetzner, 'Bibliopola Argentiniensis', Alchimie und Lullismus in Straßburg an den Anfängen der Moderne", *Sudhoffs Archiv* 75 (1991), pp. 140-162.

²¹ The year "1614" in Peirce's List, just quoted, must be an error; it most probably stands for "1617", that is to say, the third edition of Zetzner's anthology. Zetzner's 1617 edition is also referred to in the bibliographical section of W 4, 599. (The anthology is missing, however, in Max Fisch's sketchy description of Peirce's library in *Peirce, Semiotic, and Pragmatism. Essays by Max H. Fisch*, ed. Kenneth Laine Ketner and Christian J. W. Kloesel [Bloomington: Indiana University Press, 1986], pp. 51-54.)

²² Cf. my remarks in Raimundus Lullus, *Ars brevis*, ed. and German transl. Alexander Fidora (Hamburg: Felix Meiner Verlag, 1999), pp. XXXVI-XLI; as well as the excellent introduction by Anthony Bonner to the reprint of Zetzner's edition: Raimundus Lullus, *Opera. Reprint of the Strasbourg 1651 edition*, introd. Anthony Bonner, 2 vols. (Stuttgart-Bad Cannstatt: Frommann-Holzboog, 1996), vol. I, pp. 9*-45*.

ly, it does not contain the *Arbor scientiae*, which is the only text, as far as I can see, in which Llull discusses the concepts *prioritas*, *secundioritas* and *tertioritas* among the Hundred forms.²³

However, the commentary of Valerius de Valeriis is based almost entirely on the *Arbor scientiae* and it devotes a good deal of attention to the Hundred forms included in this latter work, of which it discusses those 47 forms which Valerius considers to be of the greatest importance. The Venetian author, in fact a member of a leading noble family,²⁴ was staying in Augsburg while writing his commentary upon Llull, entitled *Opus aureum*,²⁵ which first appeared in 1589 (printed in Augsburg by Michael Manger) and was dedicated to Anton Fugger. As Valerius tells us in his commentary, difficult circumstances forced him to leave the city, with the result that he had to finish the work under pressure and in a hurry,²⁶ which would explain why not all of its parts have received the same degree of elaboration.²⁷ While the work does not yet form part of Zetzner's first edition of Llull's works, it will find itself included in the second edition and beyond, from which we can be certain that it formed part of Peirce's copy.

Moreover, as has been said before, Valerius focuses a good deal of his attention upon Llull's Hundred forms, explaining also *in extenso* the three forms we are concerned with in this paper, i.e. *prioritas*, *secundioritas* and *tertioritas*. Compared with Llull's own discussion of these forms, one has to admit that Valerius gives much more importance (and space) to these concepts than the Catalan thinker himself. So, in a more explicit way than Llull, Valerius states that the entire structure of reality ultimately depends on the categories of *prioritas* and *posterioritas*:

20. De prioritate

Quia inter omnes formas prioritas et posterioritas sunt praecipue, cum ab ipsis totus rerum ordo pendeat, maiori eget inquisitione [...]²⁸

²³ The Hundred forms recur, of course, in later works, such as the *Logica nova* (1303), the *Introductorium magnae Artis generalis* (1306, of dubious attribution), the *Ars generalis ultima* (1305-1308), the *Ars brevis* (1308) and the *Ars consilii* (1315); however, in these, there is no further reference to the three forms with which we are concerned.

²⁴ Cf. Anthony Bonner's introduction in Raimundus Lullus, *Opera. Reprint, op. cit.*, p. 15*, n. 22.

²⁵ The full title of the work reads *Aureum sane opus, in quo ea omnia breviter explicantur, quae scientiarum omnium parens, Raymundus Lullus, tam in scientiarum Arbore, quam arte generali tradidit*.

²⁶ Cf. p. 1099 of his *Opus aureum*, as published in Zetzner's edition (= Raimundus Lullus, *Opera. Reprint, op. cit.*).

²⁷ For Valerius' commentary cf. T. & J. Carreras i Artau, *Historia de la filosofía española* (Madrid, 1939-43) II, pp. 235-239, and, more recently, Anthony Bonner's introduction in Raimundus Lullus, *Opera. Reprint, op. cit.*, pp. 29*-31*. See also Irena Backus, "La survie des *Artes* de Raymond Lull au 16e siècle. Le traitement des 'Prédicats absolus' dans les Commentaires d'Agrippa (ca. 1510) et de Valerius (1589)", *Archiv für Geschichte der Philosophie* 66 (1984), pp. 281-293.

²⁸ Cf. p. 1009 of Valerius' *Opus aureum*, as published in Zetzner's edition (= Raimundus Lullus, *Opera. Reprint, op. cit.*).

Immediately after this, Valerius goes on to describe the five different modes of *prioritas* by combining a Lullian and a Scotist approach in a rather original manner:

Quinque modos prioritatis Scotistae in suis formalitatibus assignant, quorum prior est prioritas perfectionis, et sic in quolibet genere entium datur unum primum, quod rationem mensurae habet, intelligendo de mensura perfectionis. [...] Secundus modus est generationis proprietates, de qua prioritate Aristoteles in 9. *Metaph.* inquit. Tertius modus est durationis prioritas, quae duratio triplex est, scilicet aeternitas, aevum et tempus. [...] Quartus modus est naturae, cuius prioritatis quinque sunt gradus. Primus est, qui in una fundatur natura, atque ad aliam terminatur, ita, quod inter naturas illas sit ordo producentis ad productum. Secundus est inter illa, quorum unum est (quasi) originatum ab alio, ut de propria passione dicere possumus, quae a suo subiecto (quasi) originatur. [...] Tertius prioritatis naturae gradus in illis reperitur, quorum unum ab alio non dependet, ut effectus vel mensuratum, vel conservatum, unum tamen aliud praesupponit; et hic prioritatis gradus inter intellectum et voluntatem invenitur. [...] Quartus gradus inter ea haud dubie est, quae sunt infinita, et unum ab alio pullulat, et hic gradus inter Dei essentiam et attributa consistit. Quintus et ultimus est, quando inter aliqua duo est tantum distinctio inter proprietatem personalem [...] et hoc modo Pater divinus est prior Filio [...], ut D. Bonaventura et Ioannes de Ripa sentiunt, quorum sententiam Theologorum omnium Princeps Scotus, et abstractionum Pater Franciscus Mayronus validissimis rationibus tuentur. [...] Quintus et ultimus prioritatis modus originis prioritas nuncupatur, quae in divinis esse conceditur, et praecipue inter personam originantem et originatam [...] Sat nobis sit de modis prioritatis dixisse, quorum cognitione ingeniosus lector poterit de facili cognoscere, qua prioritate radices in se ramos, branchas et reliquas arborum partes praecedant, et pars una aliam, immo et quaelibet radix quamlibet, sive in se considerata sive ut in arbore quacunque et in qualibet arboris parte contenta, discurrendo per omnes modos. Proportionabiliter de posterioritate intellige, de qua Lullus agit sub ratione duarum immediate sequentium formarum.²⁹

This long quotation does not only confirm the importance Valerius concedes to Llull's concept of *prioritas*, but it shows, as indicated before, that Valerius reads Llull in combination with Duns Scotus, whom he refers to as "Princeps theologorum", as well as with other Franciscan Scotists, such as Francis of Meyronnes.³⁰ In so doing, he resembles other famous Lullists, such as Pere

²⁹ *Ibid.*, pp. 1009-1010.

³⁰ Both are quoted repeatedly. In addition to the passage given above, see, e.g., *ibid.*, p. 996. Francis of Meyronnes also appears in Peirce's MS 1549 "Catalogue of Books on Mediaeval Logic which are Available in Cambridge", referred to before.

Daguí (d. 1500) and Bernard Lavinheta (d. 1523) who also combined Lull and Scotus.³¹

What is interesting about this combination is not only the fact that Peirce also had a predilection for Scotist authors, but that Valerius brings together Lull's idea of *prioritas* with Scotus' very notion of the *formalitates* – a doctrine so dear to Peirce, who saw it as a key to solving the problem of nominalism versus realism: "His [i.e. Scotus'] theory of the formalities was the subtlest, except perhaps Hegel's logic, ever broached, and he was separated from nominalism only by the division of a hair" (CP 8.11). This, of course, is not the place to discuss the doctrine of formalities and its consequences for Peirce's realism; what I would like to stress, however, is that Valerius' approach might indeed provide some evidence for John Boler's recent suggestion that there is a systematic link between Peirce's categories and Scotus' doctrine of the formalities.³² In any case, it would seem that such a link is based on the Lullist tradition.

Moreover, after presenting *prioritas*, Valerius goes on, as announced in the last sentence of the quotation above, to outline *secundioritas* (no. 21) and *tertioritas* (no. 22). Although these forms do not receive as much attention – maybe because they have been implicitly dealt with in the paragraph on *prioritas* –, Valerius finishes his exposition by insisting, again, on the fact that these forms, i.e. *prioritas*, *secundioritas* and *tertioritas*, are universal with respect to all similar forms ("universalis ad omnes consimiles formas, quae in qualibet arbore sunt seminatae").³³ So all other phenomena are ultimately reducible to this triplet.³⁴

Peirce's copy of the Zetzner edition, which he describes as being bound together with Alsted's *Clavis Artis lullianae*, must be identical to the copy of the Zetzner edition now at the Johns Hopkins Library (Eisenhower B765 .L8 1617 [copy 1]),³⁵ which is similarly bound together with Alsted.³⁶ Like so many of

³¹ For Dagui see T. & J. Carreras y Artau, *op. cit.* II, pp. 65-79, esp. p. 73-74 and 78, where Scotus and the formalities are referred to explicitly. For Lavinheta see *ibid.*, pp. 209-215; although Carreras y Artau do not mention Scotus here, the influence is more than evident: cf. Bernard Lavinheta, *Explanatio compendiosaque applicatio Artis Raymundi Lulli* (Lyons: Jean Moylin, 1523, reprinted Hildesheim: Gerstenberg Verlag, 1977), where he makes use of Scotus' doctrine of the formalities (Tertia pars, lib. 2, fols. 27v-30v).

³² Cf. John Boler, "Peirce and Medieval Thought", *op. cit.*, pp. 71-73. For a similar suggestion, which refers to Scotus and John Buridan as possible sources of Peirce's theory of the categories, see Mauricio Beuchot, *Estudios sobre Peirce y la Escolástica* (Pamplona: Servicio de Publicaciones de la Universidad de Navarra, 2002), pp. 63-68.

³³ Cf. p. 1011 of Valerius' *Opus aureum*, as published in Zetzner's edition (= Raimundus Lullus, *Opera. Reprint, op. cit.*).

³⁴ The triplet reappears later *ibid.*, p. 1059.

³⁵ This has been confirmed by John A. Buchtel, Curator of Rare Books at the Johns Hopkins University. In an e-mail to Anthony Bonner from September 26, 2005, he writes that the "copy 1 has Charles S. Peirce's signature on one of the front flyleaves". He adds that there is "no evidence of handwritten annotations".

³⁶ Cf. note 19 above.

Peirce's mediaeval books, this volume will have entered the library in 1881 when Peirce quit the University and sold his collection of 295 volumes for \$550 to the library.³⁷

Given the fact that the Zetzner edition of Llull's works was among the books belonging to Peirce's own library, we may take for granted that he knew Valerius' commentary.

Conclusion

Clearly, Llull was not a good authority to lean on, and nor was Valerius de Valeriis – according to Prantl at least. It is no surprise, therefore, that Peirce mentions neither Llull nor Valerius as the sources for his account of the categories in terms of "Firstness", "Secondness" and "Thirdness".

However, after what has been said in the preceding pages, I think that there cannot be the slightest doubt that Peirce must have come across the concepts of *prioritas*, *secundioritas* and *tertioritas* in Llull's *Arbor scientiae* or, more probably, in Valerius' Lullo-Scotist *Opus aureum* and that these works inspired not only his terminology on this point but also the systematic shape of his account of the categories, possessing, as it does, the greatest relevance for his philosophy.

Over recent years, Llull's influence on such important figures in the history of philosophy as Nicholas of Cusa, Leibniz and others,³⁸ has become more and more clear. Maybe it is also opportune to review Peirce's debt with respect to Llull – a debt which today, as we start to understand Llull's project in the context of a logic of relations, seems to be much more considerable than has been held before.³⁹

In the light of this, it would certainly be worth further to study the line of thought that leads from Llull's *Ars inventiva* to Leibniz' *Characteristica universalis* up to Peirce's *Logic of discovery*. Who knows if, eventually, Peirce himself will turn out to be part of "the possible future of this part of logic" (W 4, 487)?

³⁷ Cf. Max H. Fisch, *Peirce, Semiotic, and Pragmatism*, *op. cit.*, pp. 51-54.

³⁸ For Nicholas cf. Ermenegildo Bidese, Alexander Fidora and Paul Renner (eds.), *Ramon Llull und Nikolaus von Kues: Eine Begegnung im Zeichen der Toleranz / Raimondo Lullo e Niccolò Cusano: Un incontro nel segno della tolleranza* (Turnhout: Brepols, 2005); for Leibniz see my note in *SL* 40 (2000), pp. 175-176.

³⁹ Cf. Anthony Bonner's above-mentioned article "Ramon Llull: relació, acció, combinatòria i lògica moderna", *op. cit.*

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Resum

És sabut que Charles S. Peirce, sens dubte un dels filòsofs americans més importants del segle XIX, va estar molt influenciat pel pensament medieval. Peirce mateix no va ocultar la seva gran admiració per figures com Escot, Ockham i altres lògics medievals, sobretot pel seu tractament del problema dels universals. Amb tot, els estudis recents sobre Peirce mostren que la influència medieval que va rebre va molt més enllà del que poden fer pensar les seves referències explícites. Aquest article vol cridar l'atenció sobre les similituds entre algunes idees que Lull va exposar a l'*Arbor scientiae* i els conceptes clau de la filosofia peirceana: «Firstness», «Secondness» i «Thirdness», tot analitzant aquestes similituds des del punt de vista històric i sistemàtic.

Abstract

It is well known that Charles S. Peirce, without doubt one of the most important American philosophers of the nineteenth century, was very influenced by medieval thought. Peirce himself never concealed his great admiration for figures such as Duns Scotus, Ockham, and other medieval logicians, above all for their treatment of the problem of universals. Recent research, however, has shown that the medieval influence he received went much further than what one might gather from his explicit references. This article would like to point out the similarity between some ideas that Lull expounded in the *Arbor scientiae* and the key Peircian concepts of "Firstness", "Secondness" and "Thirdness", analyzing these similarities both from a historical and a systematic point of view.